SBI4U **Diagnostic Quiz: Cellular Respiration** [20] Name:\_\_\_\_\_\_\_\_\_\_\_

1. For each of the given reactions, identify the reaction type and the stage of cellular respiration. [6]

|  |  |  |
| --- | --- | --- |
| **Reaction** | **Reaction Type** | **Stage of Cellular Respiration** |
| a) 1,3-bisphosphoglycerate + ADP 🡪 3-phosphoglycerate + ATP |  |  |
| b) isocitrate 🡪 α-ketoglutarate + CO2 |  |  |
| c) FADH2 🡪 FAD+ |  |  |

2. Fill in the chart. [9]

|  |  |  |  |
| --- | --- | --- | --- |
| **Product** | **Number of Molecules Produced during Glycolysis for 1 glucose** | **Number of Molecules Produced during Pyruvate Oxidation for 1 glucose** | **Number of Molecules Produced during Krebs Cycle for 1 glucose** |
| ATP |  |  |  |
| NADH |  |  |  |
| FADH2 |  |  |  |

3. Determine whether the statement is true or false. If the statement is false, correct a word or phrase so it reads true. Adding or removing ‘no’ or ‘not’ is not accepted. Only 0.5 mark will be given if the statement is identified as false but not corrected properly.

a) Cyt c is a mobile component of the electron transport chain that is located within the inner mitochondrial membrane.

b) DHAP must be converted to G3P during glycolysis because only G3P is used to make the end product acetyl-coA.

c) NADH dehydrogenase has more free energy than cytochrome oxidase.

d) Substrate-level phosphorylation requires ATP synthase.

e) Chemiosmosis involves the movement of protons against its concentration gradient through ATP synthase.